

SEQUENCE LISTING

<110> Rory A.J. Curtis

<120> 55053, A Novel Human Eukaryotic Kinase
and Uses Therefor

<130> MNI-206

<150> 60/248,893

<151> 2000-11-15

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                Met Ser Ser Gly Ala Lys Glu Gly Gly
                  1             5

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ggg ggc tct ccc gcc tac cac ctc ccc cac ccc cac ccc cac cca ccc 160
Gly Gly Ser Pro Ala Tyr His Leu Pro His Pro His Pro His Pro Pro
 10             15             20             25

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```

cag cac gcc caa tat gtg ggc ccc tat cgg ctg gag aag acg ctg ggc 208
Gln His Ala Gln Tyr Val Gly Pro Tyr Arg Leu Glu Lys Thr Leu Gly
          30             35             40

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aaa gga cag aca ggg ctg gtt aaa ctc ggg gtc cac tgc atc acg ggt 256
Lys Gly Gln Thr Gly Leu Val Lys Leu Gly Val His Cys Ile Thr Gly
          45             50             55

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```

cag aag gtc gcc atc aag atc gtg aac cgg gag aag ctg tcg gag tcg 304
Gln Lys Val Ala Ile Lys Ile Val Asn Arg Glu Lys Leu Ser Glu Ser
 60             65             70

```

```

gtg ctg atg aag gtg gag cgg gag atc gcc atc ctg aag ctc atc gaa 352
Val Leu Met Lys Val Glu Arg Glu Ile Ala Ile Leu Lys Leu Ile Glu
 75             80             85

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```

cac cca cat gtc ctc aag ctc cac gac gtc tac gag aac aag aaa tat 400
His Pro His Val Leu Lys Leu His Asp Val Tyr Glu Asn Lys Lys Tyr
 90             95             100             105

```

```

ttg tac ctg gtt ctg gag cac gtc tcg ggg ggt gag cta ttc gac tac 448
Leu Tyr Leu Val Leu Glu His Val Ser Gly Gly Glu Leu Phe Asp Tyr
          110             115             120

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| | |
|---|------|
| ctg gta aag aag ggg aga ctg acg ccc aag gag gcc cga aag ttc ttc | 496 |
| Leu Val Lys Lys Gly Arg Leu Thr Pro Lys Glu Ala Arg Lys Phe Phe | |
| 125 130 135 | |
| cgc cag att gtg tct gcg ctg gac ttc tgc cac agc tac tcc atc tgc | 544 |
| Arg Gln Ile Val Ser Ala Leu Asp Phe Cys His Ser Tyr Ser Ile Cys | |
| 140 145 150 | |
| cac aga gac cta aag ccc gag aac ctg ctt ttg gat gag aaa aac aac | 592 |
| His Arg Asp Leu Lys Pro Glu Asn Leu Leu Leu Asp Glu Lys Asn Asn | |
| 155 160 165 | |
| atc cgc att gca gac ttc ggc atg gcg tcc ctg cag gtg ggg gac agc | 640 |
| Ile Arg Ile Ala Asp Phe Gly Met Ala Ser Leu Gln Val Gly Asp Ser | |
| 170 175 180 185 | |
| ctc ctg gag acc agc tgc ggg tcc ccc cat tat gcg tgt cca gag gtg | 688 |
| Leu Leu Glu Thr Ser Cys Gly Ser Pro His Tyr Ala Cys Pro Glu Val | |
| 190 195 200 | |
| att aag ggg gaa aaa tat gat ggc cgc cgg gca gac atg tgg agc tgt | 736 |
| Ile Lys Gly Glu Lys Tyr Asp Gly Arg Arg Ala Asp Met Trp Ser Cys | |
| 205 210 215 | |
| gga gtc atc ctc ttc gcc ctg ctc gtg ggg gct ctg ccc ttt gat gac | 784 |
| Gly Val Ile Leu Phe Ala Leu Leu Val Gly Ala Leu Pro Phe Asp Asp | |
| 220 225 230 | |
| gac aac ctc cgc cag ctg ctg gag aag gtg aaa cgg ggc gtc ttc cac | 832 |
| Asp Asn Leu Arg Gln Leu Leu Glu Lys Val Lys Arg Gly Val Phe His | |
| 235 240 245 | |
| atg ccc cac ttc att cct cca gat tgc cag agc ctc ctg agg gga atg | 880 |
| Met Pro His Phe Ile Pro Pro Asp Cys Gln Ser Leu Leu Arg Gly Met | |
| 250 255 260 265 | |
| atc gaa gtg gag ccc gaa aaa agg ctc agt ctg gag caa att cag aaa | 928 |
| Ile Glu Val Glu Pro Glu Lys Arg Leu Ser Leu Glu Gln Ile Gln Lys | |
| 270 275 280 | |
| cat cct tgg tac cta ggc ggg aaa cac gag cca gac ccg tgc ctg gag | 976 |
| His Pro Trp Tyr Leu Gly Gly Lys His Glu Pro Asp Pro Cys Leu Glu | |
| 285 290 295 | |
| cca gcc cct ggc cgc cgg gta gcc atg cgg agc ctg cca tcc aac gga | 1024 |
| Pro Ala Pro Gly Arg Arg Val Ala Met Arg Ser Leu Pro Ser Asn Gly | |
| 300 305 310 | |
| gag ctg gac ccc gac gtc cta gag agc atg gca tca ctg ggc tgc ttc | 1072 |
| Glu Leu Asp Pro Asp Val Leu Glu Ser Met Ala Ser Leu Gly Cys Phe | |
| 315 320 325 | |
| agg gac cgc gag agg ctg cat cgc gag ctg cgc agt gag gag gag aac | 1120 |
| Arg Asp Arg Glu Arg Leu His Arg Glu Leu Arg Ser Glu Glu Glu Asn | |
| 330 335 340 345 | |
| caa gaa aag atg ata tat tat ctg ctt ttg gat cgg aag gag cgg tat | 1168 |
| Gln Glu Lys Met Ile Tyr Tyr Leu Leu Leu Asp Arg Lys Glu Arg Tyr | |
| 350 355 360 | |

| | |
|---|------|
| ccc agc tgt gag gac cag gac ctg cct ccc cgg aat gat gtt gac ccc | 1216 |
| Pro Ser Cys Glu Asp Gln Asp Leu Pro Pro Arg Asn Asp Val Asp Pro | |
| 365 370 375 | |
| ccc cgg aag cgt gtg gat tct ccc atg ctg agc cgt cac ggg aag cgg | 1264 |
| Pro Arg Lys Arg Val Asp Ser Pro Met Leu Ser Arg His Gly Lys Arg | |
| 380 385 390 | |
| cga cca gag cgg aag tcc atg gaa gtc ctg agc atc acc gat gcc ggg | 1312 |
| Arg Pro Glu Arg Lys Ser Met Glu Val Leu Ser Ile Thr Asp Ala Gly | |
| 395 400 405 | |
| ggt ggt ggc tcc cct gta ccc acc cga cgg gcc ttg gag atg gcc cag | 1360 |
| Gly Gly Gly Ser Pro Val Pro Thr Arg Arg Ala Leu Glu Met Ala Gln | |
| 410 415 420 425 | |
| cac agc cag aga tcc cgt agc gtc agt gga gcc tcc acg ggt ctg tcc | 1408 |
| His Ser Gln Arg Ser Arg Ser Val Ser Gly Ala Ser Thr Gly Leu Ser | |
| 430 435 440 | |
| tcc agc cct cta agc agc cca agg agt ccg gtc ttt tcc ttt tca ccg | 1456 |
| Ser Ser Pro Leu Ser Ser Pro Arg Ser Pro Val Phe Ser Phe Ser Pro | |
| 445 450 455 | |
| gag ccg ggg gct gga gat gag gct cga ggc ggg ggc tcc ccg act tcc | 1504 |
| Glu Pro Gly Ala Gly Asp Glu Ala Arg Gly Gly Gly Ser Pro Thr Ser | |
| 460 465 470 | |
| aaa acg cag acg ctg cct tct cgg ggc ccc agg ggt ggg ggc gcc ggg | 1552 |
| Lys Thr Gln Thr Leu Pro Ser Arg Gly Pro Arg Gly Gly Gly Ala Gly | |
| 475 480 485 | |
| gag cag ccc ccg ccc ccc agt gcc cgc tcc aca ccc ctg ccc ggc ccc | 1600 |
| Glu Gln Pro Pro Pro Ser Ala Arg Ser Thr Pro Leu Pro Gly Pro | |
| 490 495 500 505 | |
| cca ggc tcc ccg cgc tcc tct ggc ggg acc ccc ttg cac tcg cct ctg | 1648 |
| Pro Gly Ser Pro Arg Ser Ser Gly Gly Thr Pro Leu His Ser Pro Leu | |
| 510 515 520 | |
| cac acg ccc cgg gcc agt ccc acc ggg acc ccg ggg aca aca cca ccc | 1696 |
| His Thr Pro Arg Ala Ser Pro Thr Gly Thr Pro Gly Thr Thr Pro Pro | |
| 525 530 535 | |
| ccc agc ccc ggc ggt ggc gtc ggg gga gcc gcc tgg agg agt cgt ctc | 1744 |
| Pro Ser Pro Gly Gly Gly Val Gly Gly Ala Ala Trp Arg Ser Arg Leu | |
| 540 545 550 | |
| aac tcc atc cgc aac agc ttc ctg ggc tcc cct cgc ttt cac cgg cgc | 1792 |
| Asn Ser Ile Arg Asn Ser Phe Leu Gly Ser Pro Arg Phe His Arg Arg | |
| 555 560 565 | |
| aag atg cag gtc cct acc gct gag gag atg tcc agc ttg acg cca gag | 1840 |
| Lys Met Gln Val Pro Thr Ala Glu Glu Met Ser Ser Leu Thr Pro Glu | |
| 570 575 580 585 | |
| tcc tcc ccg gag ctg gca aaa cgc tcc tgg ttc ggg aac ttc atc tcc | 1888 |
| Ser Ser Pro Glu Leu Ala Lys Arg Ser Trp Phe Gly Asn Phe Ile Ser | |
| 590 595 600 | |

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|--|------|
| ttg gac aaa gaa gaa caa ata ttc ctc gtg cta aag gac aaa cct ctc | 1936 |
| Leu Asp Lys Glu Glu Gln Ile Phe Leu Val Leu Lys Asp Lys Pro Leu | |
| 605 610 615 | |
| agc agc atc aaa gca gac atc gtc cat gcc ttt ctg tgc atc ccc agc | 1984 |
| Ser Ser Ile Lys Ala Asp Ile Val His Ala Phe Leu Ser Ile Pro Ser | |
| 620 625 630 | |
| ctg agt cac agt gtg ctg tca cag acc agc ttc agg gcc gag tac aag | 2032 |
| Leu Ser His Ser Val Leu Ser Gln Thr Ser Phe Arg Ala Glu Tyr Lys | |
| 635 640 645 | |
| gcc agt ggc ggc ccc tcc gtc ttc caa aag ccc gtc cgc ttc cag gtg | 2080 |
| Ala Ser Gly Gly Pro Ser Val Phe Gln Lys Pro Val Arg Phe Gln Val | |
| 650 655 660 665 | |
| gac atc agc tcc tct gag ggt cca gag ccc tcc ccg cga cgg gac ggc | 2128 |
| Asp Ile Ser Ser Ser Glu Gly Pro Glu Pro Ser Pro Arg Arg Asp Gly | |
| 670 675 680 | |
| agc gga ggt ggt ggc atc tac tcc gtc acc ttc act ctc atc tgc ggt | 2176 |
| Ser Gly Gly Gly Ile Tyr Ser Val Thr Phe Thr Leu Ile Ser Gly | |
| 685 690 695 | |
| ccc agc cgt cgg ttc aag cga gtg gtg gag acc atc cag gca cag ctc | 2224 |
| Pro Ser Arg Arg Phe Lys Arg Val Val Glu Thr Ile Gln Ala Gln Leu | |
| 700 705 710 | |
| ctg agc act cat gac cag ccc tcc gtg cag gcc ctg gca gac gag aag | 2272 |
| Leu Ser Thr His Asp Gln Pro Ser Val Gln Ala Leu Ala Asp Glu Lys | |
| 715 720 725 | |
| aac ggg gcc cag acc cgg cct gct ggt gcc cca ccc cga agc ctg cag | 2320 |
| Asn Gly Ala Gln Thr Arg Pro Ala Gly Ala Pro Pro Arg Ser Leu Gln | |
| 730 735 740 745 | |
| ccc cca ccc ggc cgc cca gac cca gag ctg agc agc tct ccc cgc cga | 2368 |
| Pro Pro Pro Gly Arg Pro Asp Pro Glu Leu Ser Ser Ser Pro Arg Arg | |
| 750 755 760 | |
| ggc ccc ccc aag gac aag aag ctc ctg gcc acc aac ggg acc cct ctg | 2416 |
| Gly Pro Pro Lys Asp Lys Lys Leu Leu Ala Thr Asn Gly Thr Pro Leu | |
| 765 770 775 | |
| ccc tgacccccacg gggccgggga gggaggggac cccctccac ccccttccg | 2469 |
| Pro | |
| tgccccccaa ctgtgaatct gtaaataagg cccaaggaac atgtcgggag gggggtggac | 2529 |
| acaaaaaccg gccttgccct gcagggatgg ggctccacag gccgtgcccc actgggggtg | 2589 |
| gttctagggg aacagggggc gggggagctg tttctatattt atttattgat taatttatta | 2649 |
| ttttatattat tgatcaatct ctctgcgggg tgggggtggg gagggacggg agctggttgg | 2709 |
| gggtgcttag cagatccgga cagggccctc tgtccctgtg tcgtccccaa cccctcttc | 2769 |
| ccgggcccct cctcccctgg tctcccccc acgaccttct gtacggattt gctctccgga | 2829 |
| aggaattctg gtttcgctg atcctgcctg cgctccgtgtc tctgattccg ccggcgga | 2889 |
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 35 40 45
 Lys Leu Gly Val His Cys Ile Thr Gly Gln Lys Val Ala Ile Lys Ile
 50 55 60
 Val Asn Arg Glu Lys Leu Ser Glu Ser Val Leu Met Lys Val Glu Arg
 65 70 75 80
 Glu Ile Ala Ile Leu Lys Leu Ile Glu His Pro His Val Leu Lys Leu
 85 90 95
 His Asp Val Tyr Glu Asn Lys Lys Tyr Leu Tyr Leu Val Leu Glu His
 100 105 110
 Val Ser Gly Gly Glu Leu Phe Asp Tyr Leu Val Lys Lys Gly Arg Leu
 115 120 125
 Thr Pro Lys Glu Ala Arg Lys Phe Phe Arg Gln Ile Val Ser Ala Leu
 130 135 140
 Asp Phe Cys His Ser Tyr Ser Ile Cys His Arg Asp Leu Lys Pro Glu
 145 150 155 160
 Asn Leu Leu Leu Asp Glu Lys Asn Asn Ile Arg Ile Ala Asp Phe Gly
 165 170 175
 Met Ala Ser Leu Gln Val Gly Asp Ser Leu Leu Glu Thr Ser Cys Gly
 180 185 190
 Ser Pro His Tyr Ala Cys Pro Glu Val Ile Lys Gly Glu Lys Tyr Asp
 195 200 205
 Gly Arg Arg Ala Asp Met Trp Ser Cys Gly Val Ile Leu Phe Ala Leu
 210 215 220
 Leu Val Gly Ala Leu Pro Phe Asp Asp Asp Asn Leu Arg Gln Leu Leu
 225 230 235 240
 Glu Lys Val Lys Arg Gly Val Phe His Met Pro His Phe Ile Pro Pro
 245 250 255
 Asp Cys Gln Ser Leu Leu Arg Gly Met Ile Glu Val Glu Pro Glu Lys
 260 265 270
 Arg Leu Ser Leu Glu Gln Ile Gln Lys His Pro Trp Tyr Leu Gly Gly
 275 280 285
 Lys His Glu Pro Asp Pro Cys Leu Glu Pro Ala Pro Gly Arg Arg Val
 290 295 300
 Ala Met Arg Ser Leu Pro Ser Asn Gly Glu Leu Asp Pro Asp Val Leu
 305 310 315 320
 Glu Ser Met Ala Ser Leu Gly Cys Phe Arg Asp Arg Glu Arg Leu His
 325 330 335
 Arg Glu Leu Arg Ser Glu Glu Glu Asn Gln Glu Lys Met Ile Tyr Tyr
 340 345 350
 Leu Leu Leu Asp Arg Lys Glu Arg Tyr Pro Ser Cys Glu Asp Gln Asp
 355 360 365
 Leu Pro Pro Arg Asn Asp Val Asp Pro Pro Arg Lys Arg Val Asp Ser
 370 375 380
 Pro Met Leu Ser Arg His Gly Lys Arg Arg Pro Glu Arg Lys Ser Met
 385 390 395 400
 Glu Val Leu Ser Ile Thr Asp Ala Gly Gly Gly Gly Ser Pro Val Pro
 405 410 415
 Thr Arg Arg Ala Leu Glu Met Ala Gln His Ser Gln Arg Ser Arg Ser
 420 425 430

Val Ser Gly Ala Ser Thr Gly Leu Ser Ser Ser Pro Leu Ser Ser Pro
 435 440 445
 Arg Ser Pro Val Phe Ser Phe Ser Pro Glu Pro Gly Ala Gly Asp Glu
 450 455 460
 Ala Arg Gly Gly Gly Ser Pro Thr Ser Lys Thr Gln Thr Leu Pro Ser
 465 470 475 480
 Arg Gly Pro Arg Gly Gly Gly Ala Gly Glu Gln Pro Pro Pro Pro Ser
 485 490 495
 Ala Arg Ser Thr Pro Leu Pro Gly Pro Pro Gly Ser Pro Arg Ser Ser
 500 505 510
 Gly Gly Thr Pro Leu His Ser Pro Leu His Thr Pro Arg Ala Ser Pro
 515 520 525
 Thr Gly Thr Pro Gly Thr Thr Pro Pro Pro Ser Pro Gly Gly Gly Val
 530 535 540
 Gly Gly Ala Ala Trp Arg Ser Arg Leu Asn Ser Ile Arg Asn Ser Phe
 545 550 555 560
 Leu Gly Ser Pro Arg Phe His Arg Arg Lys Met Gln Val Pro Thr Ala
 565 570 575
 Glu Glu Met Ser Ser Leu Thr Pro Glu Ser Ser Pro Glu Leu Ala Lys
 580 585 590
 Arg Ser Trp Phe Gly Asn Phe Ile Ser Leu Asp Lys Glu Glu Gln Ile
 595 600 605
 Phe Leu Val Leu Lys Asp Lys Pro Leu Ser Ser Ile Lys Ala Asp Ile
 610 615 620
 Val His Ala Phe Leu Ser Ile Pro Ser Leu Ser His Ser Val Leu Ser
 625 630 635 640
 Gln Thr Ser Phe Arg Ala Glu Tyr Lys Ala Ser Gly Gly Pro Ser Val
 645 650 655
 Phe Gln Lys Pro Val Arg Phe Gln Val Asp Ile Ser Ser Ser Glu Gly
 660 665 670
 Pro Glu Pro Ser Pro Arg Arg Asp Gly Ser Gly Gly Gly Ile Tyr
 675 680 685
 Ser Val Thr Phe Thr Leu Ile Ser Gly Pro Ser Arg Arg Phe Lys Arg
 690 695 700
 Val Val Glu Thr Ile Gln Ala Gln Leu Leu Ser Thr His Asp Gln Pro
 705 710 715 720
 Ser Val Gln Ala Leu Ala Asp Glu Lys Asn Gly Ala Gln Thr Arg Pro
 725 730 735
 Ala Gly Ala Pro Pro Arg Ser Leu Gln Pro Pro Pro Gly Arg Pro Asp
 740 745 750
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| ctc ccc cac ccc cac ccc cac cca ccc cag cac gcc caa tat gtg ggc Leu Pro His Pro His Pro His Pro Pro Gln His Ala Gln Tyr Val Gly | 96 |
| 20 25 30 | |
| ccc tat cgg ctg gag aag acg ctg ggc aaa gga cag aca ggg ctg gtt Pro Tyr Arg Leu Glu Lys Thr Leu Gly Lys Gly Gln Thr Gly Leu Val | 144 |
| 35 40 45 | |
| aaa ctc ggg gtc cac tgc atc acg ggt cag aag gtc gcc atc aag atc Lys Leu Gly Val His Cys Ile Thr Gly Gln Lys Val Ala Ile Lys Ile | 192 |
| 50 55 60 | |
| gtg aac cgg gag aag ctg tgc gag tgc gtg ctg atg aag gtg gag cgg Val Asn Arg Glu Lys Leu Ser Glu Ser Val Leu Met Lys Val Glu Arg | 240 |
| 65 70 75 80 | |
| gag atc gcc atc ctg aag ctc atc gaa cac cca cat gtc ctc aag ctc Glu Ile Ala Ile Leu Lys Leu Ile Glu His Pro His Val Leu Lys Leu | 288 |
| 85 90 95 | |
| cac gac gtc tac gag aac aag aaa tat ttg tac ctg gtt ctg gag cac His Asp Val Tyr Glu Asn Lys Lys Tyr Leu Tyr Leu Val Leu Glu His | 336 |
| 100 105 110 | |
| gtc tgc ggg ggt gag cta ttc gac tac ctg gta aag aag ggg aga ctg Val Ser Gly Gly Glu Leu Phe Asp Tyr Leu Val Lys Lys Gly Arg Leu | 384 |
| 115 120 125 | |
| acg ccc aag gag gcc cga aag ttc ttc cgc cag att gtg tct gcg ctg Thr Pro Lys Glu Ala Arg Lys Phe Phe Arg Gln Ile Val Ser Ala Leu | 432 |
| 130 135 140 | |
| gac ttc tgc cac agc tac tcc atc tgc cac aga gac cta aag ccc gag Asp Phe Cys His Ser Tyr Ser Ile Cys His Arg Asp Leu Lys Pro Glu | 480 |
| 145 150 155 160 | |
| aac ctg ctt ttg gat gag aaa aac aac atc cgc att gca gac ttc ggc Asn Leu Leu Leu Asp Glu Lys Asn Asn Ile Arg Ile Ala Asp Phe Gly | 528 |
| 165 170 175 | |
| atg gcg tcc ctg cag gtg ggg gac agc ctc ctg gag acc agc tgc ggg Met Ala Ser Leu Gln Val Gly Asp Ser Leu Leu Glu Thr Ser Cys Gly | 576 |
| 180 185 190 | |
| tcc ccc cat tat gcg tgt cca gag gtg att aag ggg gaa aaa tat gat Ser Pro His Tyr Ala Cys Pro Glu Val Ile Lys Gly Glu Lys Tyr Asp | 624 |
| 195 200 205 | |
| ggc cgc cgg gca gac atg tgg agc tgt gga gtc atc ctc ttc gcc ctg Gly Arg Arg Ala Asp Met Trp Ser Cys Gly Val Ile Leu Phe Ala Leu | 672 |
| 210 215 220 | |
| ctc gtg ggg gct ctg ccc ttt gat gac gac aac ctc cgc cag ctg ctg Leu Val Gly Ala Leu Pro Phe Asp Asp Asp Asn Leu Arg Gln Leu Leu | 720 |
| 225 230 235 240 | |
| gag aag gtg aaa cgg ggc gtc ttc cac atg ccc cac ttc att cct cca Glu Lys Val Lys Arg Gly Val Phe His Met Pro His Phe Ile Pro Pro | 768 |
| 245 250 255 | |

| | |
|---|------|
| gat tgc cag agc ctc ctg agg gga atg atc gaa gtg gag ccc gaa aaa | 816 |
| Asp Cys Gln Ser Leu Leu Arg Gly Met Ile Glu Val Glu Pro Glu Lys | |
| 260 265 270 | |
| agg ctc agt ctg gag caa att cag aaa cat cct tgg tac cta ggc ggg | 864 |
| Arg Leu Ser Leu Glu Gln Ile Gln Lys His Pro Trp Tyr Leu Gly Gly | |
| 275 280 285 | |
| aaa cac gag cca gac ccg tgc ctg gag cca gcc cct ggc cgc cgg gta | 912 |
| Lys His Glu Pro Asp Pro Cys Leu Glu Pro Ala Pro Gly Arg Arg Val | |
| 290 295 300 | |
| gcc atg cgg agc ctg cca tcc aac gga gag ctg gac ccc gac gtc cta | 960 |
| Ala Met Arg Ser Leu Pro Ser Asn Gly Glu Leu Asp Pro Asp Val Leu | |
| 305 310 315 320 | |
| gag agc atg gca tca ctg ggc tgc ttc agg gac cgc gag agg ctg cat | 1008 |
| Glu Ser Met Ala Ser Leu Gly Cys Phe Arg Asp Arg Glu Arg Leu His | |
| 325 330 335 | |
| cgc gag ctg cgc agt gag gag gag aac caa gaa aag atg ata tat tat | 1056 |
| Arg Glu Leu Arg Ser Glu Glu Glu Asn Gln Glu Lys Met Ile Tyr Tyr | |
| 340 345 350 | |
| ctg ctt ttg gat cgg aag gag cgg tat ccc agc tgt gag gac cag gac | 1104 |
| Leu Leu Leu Asp Arg Lys Glu Arg Tyr Pro Ser Cys Glu Asp Gln Asp | |
| 355 360 365 | |
| ctg cct ccc cgg aat gat gtt gac ccc ccc cgg aag cgt gtg gat tct | 1152 |
| Leu Pro Pro Arg Asn Asp Val Asp Pro Pro Arg Lys Arg Val Asp Ser | |
| 370 375 380 | |
| ccc atg ctg agc cgt cac ggg aag cgg cga cca gag cgg aag tcc atg | 1200 |
| Pro Met Leu Ser Arg His Gly Lys Arg Arg Pro Glu Arg Lys Ser Met | |
| 385 390 395 400 | |
| gaa gtc ctg agc atc acc gat gcc ggg ggt ggt ggc tcc cct gta ccc | 1248 |
| Glu Val Leu Ser Ile Thr Asp Ala Gly Gly Gly Gly Ser Pro Val Pro | |
| 405 410 415 | |
| acc cga cgg gcc ttg gag atg gcc cag cac agc cag aga tcc cgt agc | 1296 |
| Thr Arg Arg Ala Leu Glu Met Ala Gln His Ser Gln Arg Ser Arg Ser | |
| 420 425 430 | |
| gtc agt gga gcc tcc acg ggt ctg tcc tcc agc cct cta agc agc cca | 1344 |
| Val Ser Gly Ala Ser Thr Gly Leu Ser Ser Ser Pro Leu Ser Ser Pro | |
| 435 440 445 | |
| agg agt ccg gtc ttt tcc ttt tca ccg gag ccg ggg gct gga gat gag | 1392 |
| Arg Ser Pro Val Phe Ser Phe Ser Pro Glu Pro Gly Ala Gly Asp Glu | |
| 450 455 460 | |
| gct cga ggc ggg ggc tcc ccg act tcc aaa acg cag acg ctg cct tct | 1440 |
| Ala Arg Gly Gly Gly Ser Pro Thr Ser Lys Thr Gln Thr Leu Pro Ser | |
| 465 470 475 480 | |
| cgg ggc ccc agg ggt ggg ggc gcc ggg gag cag ccc ccg ccc ccc agt | 1488 |
| Arg Gly Pro Arg Gly Gly Gly Ala Gly Glu Gln Pro Pro Pro Pro Ser | |
| 485 490 495 | |

| | |
|---|------|
| gcc cgc tcc aca ccc ctg ccc ggc ccc cca ggc tcc ccg cgc tcc tct | 1536 |
| Ala Arg Ser Thr Pro Leu Pro Gly Pro Pro Gly Ser Pro Arg Ser Ser | |
| 500 505 510 | |
| ggc ggg acc ccc ttg cac tcg cct ctg cac acg ccc cgg gcc agt ccc | 1584 |
| Gly Gly Thr Pro Leu His Ser Pro Leu His Thr Pro Arg Ala Ser Pro | |
| 515 520 525 | |
| acc ggg acc ccg ggg aca aca cca ccc ccc agc ccc ggc ggt ggc gtc | 1632 |
| Thr Gly Thr Pro Gly Thr Thr Pro Pro Pro Ser Pro Gly Gly Gly Val | |
| 530 535 540 | |
| ggg gga gcc gcc tgg agg agt cgt ctc aac tcc atc cgc aac agc ttc | 1680 |
| Gly Gly Ala Ala Trp Arg Ser Arg Leu Asn Ser Ile Arg Asn Ser Phe | |
| 545 550 555 560 | |
| ctg ggc tcc cct cgc ttt cac cgg cgc aag atg cag gtc cct acc gct | 1728 |
| Leu Gly Ser Pro Arg Phe His Arg Arg Lys Met Gln Val Pro Thr Ala | |
| 565 570 575 | |
| gag gag atg tcc agc ttg acg cca gag tcc tcc ccg gag ctg gca aaa | 1776 |
| Glu Glu Met Ser Ser Leu Thr Pro Glu Ser Ser Pro Glu Leu Ala Lys | |
| 580 585 590 | |
| cgc tcc tgg ttc ggg aac ttc atc tcc ttg gac aaa gaa gaa caa ata | 1824 |
| Arg Ser Trp Phe Gly Asn Phe Ile Ser Leu Asp Lys Glu Glu Gln Ile | |
| 595 600 605 | |
| ttc ctc gtg cta aag gac aaa cct ctc agc agc atc aaa gca gac atc | 1872 |
| Phe Leu Val Leu Lys Asp Lys Pro Leu Ser Ser Ile Lys Ala Asp Ile | |
| 610 615 620 | |
| gtc cat gcc ttt ctg tcg atc ccc agc ctg agt cac agt gtg ctg tca | 1920 |
| Val His Ala Phe Leu Ser Ile Pro Ser Leu Ser His Ser Val Leu Ser | |
| 625 630 635 640 | |
| cag acc agc ttc agg gcc gag tac aag gcc agt ggc ggc ccc tcc gtc | 1968 |
| Gln Thr Ser Phe Arg Ala Glu Tyr Lys Ala Ser Gly Gly Pro Ser Val | |
| 645 650 655 | |
| ttc caa aag ccc gtc cgc ttc cag gtg gac atc agc tcc tct gag ggt | 2016 |
| Phe Gln Lys Pro Val Arg Phe Gln Val Asp Ile Ser Ser Ser Glu Gly | |
| 660 665 670 | |
| cca gag ccc tcc ccg cga cgg gac ggc agc gga ggt ggt ggc atc tac | 2064 |
| Pro Glu Pro Ser Pro Arg Arg Asp Gly Ser Gly Gly Gly Gly Ile Tyr | |
| 675 680 685 | |
| tcc gtc acc ttc act ctc atc tcg ggt ccc agc cgt cgg ttc aag cga | 2112 |
| Ser Val Thr Phe Thr Leu Ile Ser Gly Pro Ser Arg Arg Phe Lys Arg | |
| 690 695 700 | |
| gtg gtg gag acc atc cag gca cag ctc ctg agc act cat gac cag ccc | 2160 |
| Val Val Glu Thr Ile Gln Ala Gln Leu Leu Ser Thr His Asp Gln Pro | |
| 705 710 715 720 | |
| tcc gtg cag gcc ctg gca gac gag aag aac ggg gcc cag acc cgg cct | 2208 |
| Ser Val Gln Ala Leu Ala Asp Glu Lys Asn Gly Ala Gln Thr Arg Pro | |
| 725 730 735 | |

- 10 -

gct ggt gcc cca ccc cga agc ctg cag ccc cca ccc ggc cgc cca gac 2256
 Ala Gly Ala Pro Pro Arg Ser Leu Gln Pro Pro Pro Gly Arg Pro Asp
 740 745 750

cca gag ctg agc agc tct ccc cgc cga ggc ccc ccc aag gac aag aag 2304
 Pro Glu Leu Ser Ser Ser Pro Arg Arg Gly Pro Pro Lys Asp Lys Lys
 755 760 765

ctc ctg gcc acc aac ggg acc cct ctg ccc 2334
 Leu Leu Ala Thr Asn Gly Thr Pro Leu Pro
 770 775

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 Lys Ala Lys His Lys Thr Gly Lys Ile Val Ala Val Lys Ile Leu Lys
 20 25 30

- 11 -

Lys Glu Ser Leu Ser Leu Arg Glu Ile Gln Ile Leu Lys Arg Leu Ser
 35 40 45
 His Pro Asn Ile Val Arg Leu Leu Gly Val Phe Glu Asp Thr Asp Asp
 50 55 60
 His Leu Tyr Leu Val Met Glu Tyr Met Glu Gly Gly Asp Leu Phe Asp
 65 70 75 80
 Tyr Leu Arg Arg Asn Gly Pro Leu Ser Glu Lys Glu Ala Lys Lys Ile
 85 90 95
 Ala Leu Gln Ile Leu Arg Gly Leu Glu Tyr Leu His Ser Asn Gly Ile
 100 105 110
 Val His Arg Asp Leu Lys Pro Glu Asn Ile Leu Leu Asp Glu Asn Gly
 115 120 125
 Thr Val Lys Ile Ala Asp Phe Gly Leu Ala Arg Leu Leu Glu Lys Leu
 130 135 140
 Thr Thr Phe Val Gly Thr Pro Trp Tyr Met Met Ala Pro Glu Val Ile
 145 150 155 160
 Leu Glu Gly Arg Gly Tyr Ser Ser Lys Val Asp Val Trp Ser Leu Gly
 165 170 175
 Val Ile Leu Tyr Glu Leu Leu Thr Gly Gly Pro Leu Phe Pro Gly Ala
 180 185 190
 Asp Leu Pro Ala Phe Thr Gly Gly Asp Glu Val Asp Gln Leu Ile Ile
 195 200 205
 Phe Val Leu Lys Leu Pro Phe Ser Asp Glu Leu Pro Lys Thr Arg Ile
 210 215 220
 Asp Pro Leu Glu Glu Leu Phe Arg Ile Lys Lys Arg Arg Leu Pro Leu
 225 230 235 240
 Pro Ser Asn Cys Ser Glu Glu Leu Lys Asp Leu Leu Lys Lys Cys Leu
 245 250 255
 Asn Lys Asp Pro Ser Lys Arg Pro Gly Ser Ala Thr Ala Lys Glu Ile
 260 265 270
 Leu Asn His Pro Trp Phe
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<210> 6
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 <213> Artificial Sequence

<220>
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 Glu Asp Glu Glu Lys Ile Glu Gln Leu Val Glu Met Gly Phe Asp Arg
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 Glu Glu Val Val Lys Ala Leu Arg Ala Thr Asn Gly Asn Gly Val Glu
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 Arg Ala Ala Glu Trp Leu Leu Ser His
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<210> 7
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 <213> Artificial Sequence

<220>
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Tyr Glu Leu Leu Lys Lys Leu Gly Lys Gly Ala Phe Gly Lys Val Tyr
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Leu Ala Arg Asp Lys Lys Thr Gly Arg Leu Val Ala Ile Lys Val Ile
20      25      30
Lys Glu Arg Ile Leu Arg Glu Ile Lys Ile Leu Lys Lys Asp His Pro
35      40      45
Asn Ile Val Lys Leu Tyr Asp Val Phe Glu Asp Asp Lys Leu Tyr Leu
50      55      60
Val Met Glu Tyr Cys Glu Gly Asp Leu Gly Asp Leu Phe Asp Leu Leu
65      70      75      80
Lys Lys Arg Gly Arg Arg Gly Leu Arg Lys Val Leu Ser Glu Glu Ala
85      90      95
Arg Phe Tyr Phe Arg Gln Ile Leu Ser Ala Leu Glu Tyr Leu His Ser
100     105     110
Gln Gly Ile Ile His Arg Asp Leu Lys Pro Glu Asn Ile Leu Leu Asp
115     120     125
Ser His Val Lys Leu Ala Asp Phe Gly Leu Ala Arg Gln Leu Thr Thr
130     135     140
Phe Val Gly Thr Pro Glu Tyr Met Ala Pro Glu Val Leu Gly Tyr Gly
145     150     155     160
Lys Pro Ala Val Asp Ile Trp Ser Leu Gly Cys Ile Leu Tyr Glu Leu
165     170     175
Leu Thr Gly Lys Lys Pro Pro Phe Pro Gln Leu Asp Leu Ile Phe Lys Lys
180     185     190
Ile Gly Ser Pro Glu Ala Lys Asp Leu Ile Lys Lys Leu Leu Val Lys
195     200     205
Asp Pro Glu Lys Arg Leu Thr Ala Glu Ala Leu Glu Asp Glu Leu Asp
210     215     220
Ile Lys Ala His Pro Phe Phe
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<211> 280

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<220>

<223> tyrkin_6 domain

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Leu Thr Leu Gly Lys Lys Leu Gly Glu Gly Ala Phe Gly Glu Val Tyr
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20      25      30
Ala Lys Glu Glu Phe Leu Arg Glu Ala Lys Ile Met Lys Lys Leu Gly
35      40      45
Gly Lys His Pro Asn Ile Val Lys Leu Leu Gly Val Cys Thr Glu Glu
50      55      60
Gly Arg Arg Phe Met Glu Val Glu Pro Leu Met Ile Val Met Glu Tyr
65      70      75      80
Met Glu Gly Gly Asp Leu Leu Asp Tyr Leu Arg Lys Asn Arg Pro Lys
85      90      95
Leu Ser Leu Ser Asp Leu Leu Ser Phe Ala Leu Gln Ile Ala Lys Gly
100     105     110
Met Glu Tyr Leu Glu Ser Lys Asn Phe Val His Arg Asp Leu Ala Ala
115     120     125
Arg Asn Cys Leu Val Gly Glu Asn Lys Val Val Lys Ile Ser Asp Phe
130     135     140

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